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Cultivating personality development through outdoor education programme: the Malaysia experience

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Abstract

The aim of this quasi experimental study is to identify the elements which may influenced personality development among participants in an outdoor education programme. The elements studied were gender, and the module used based on different sequence of outdoor activities conducted. This study also tries to prove that personality changes remain in the participants for a certain length of time. Research sample comprised of 671 students in physical education and, sports education and recreation programmes in Malaysia's higher education institutions and teacher training institutes. The control groups comprised of students whom are not undergoing the two programmes mentioned above. The translated version of the Life Effectiveness Questinnaire were used in this study. Kolb's Cycle of Learning through Experience is the theoretical framework used while the research framework is adapted from Carver's Outdoor Education Framework. Personality development measured are cooperation, leadership ability, self confidence and coping with change. Statistical analysis used is descriptive and inferential statistics. t-test conducted to determine the effect of the treatment given shows a significant difference in all the constructs involved in this study. Cohen's D shows that the treatment contributes greatly to leadership ability (60%) and coping with change (61%). Wilks' Lambda in multiple analysis of variance shows that the outdoor education module used provide a significant difference and high contribution ($F=30.78$, $p<0.05$; $\acute{\eta}^2= 0.57$) to changes in personality development among the participants. Multiple regression were use to determine the effect of two predictors (gender and module) on changes of personality attributes among the participants. The programme module predicts significantly for cooperation ($r_{pmodule}= 0.50$, $p<0.05$). Gender predicts significantly for self efficacy ($r_{pgender}= 0.52$, $p<0.05$). Non parametric test which is the sign test shows that there is a retention period whereby the changes in personality development remain in the participants for a period of time. All the factors remain unchanged among the participants.

Keywords: outdoor education; personality development

1. Introduction

The Malaysia's education curriculum supports the National Education Philosophy which aims to produce wholesome students from various components especially intellectual, spiritual, emotional and physical components. The National Education Philosophy also aims to achieve one of the goals of Vision 2020, which is to produce caring

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Malaysian citizens. This philosophy also aims to produce Malaysian citizens who are knowledgeable, competent, honorable, responsible and able to achieve wellness. Therefore, the implementation of educational modules should be integrated and balanced with the priority set on the integration of skills, knowledge, values and practices.

Malaysia being a multi racial nation must strive for unity among its diverse population. What better ways to instill unity among races if not through education. But the emphasis on unity among the races is still less successfully nurtured in schools. This phenomenon suggests that there are areas to be improved in the country's education system. Focus on academic excellence in education shows that the three aspects of humanity, namely the spiritual, emotional and physical aspects, still lack proper attention from the school and community. Parents and school administrators focus and prioritize academic achievement as a yardstick of success and excellence in schools. With the excessive focus on academic achievements, good character development among students through social activities, for example, through co-curricular and outdoor activities is often neglected, despite various researches proved that co-curricular activities can contribute significantly to develop students' attitudes.

Health and Physical Education conducted in high schools in Malaysia currently has an outdoor education component as part of the learning units taught to students. However, the implementations of this program are slow and are not given priority in the school curriculum. Vasudevan (1989) states that outdoor education program which utilizes experiential learning methods and these experience is important to develop knowledge and for socialization purposes. He also states that outdoor education can enrich the lives of individuals in terms of exposure and experience. Outdoor education uses the natural environment to encourage learning and emphasizes the actual experiences that shape and improve experiences gain from the classroom.

Outdoor education which based on the concept of education across the curriculum is able to assist in enriching the knowledge and enhance the socialization process of the students. This is consistent with the findings by Gass (1995) which states that outdoor education helps students learn skills that lead to awareness of thoughts and emotions. Activities done within the group is an integral part of outdoor education activities. In these activities the students experience the emotional changes that occur throughout the day as they go about completing their tasks. Outdoor education involves cooperative learning in a democratic environment and emphasizes the interaction between teachers, students and the learning experience. In this learning experience, students learn either by doing the activity. This learning involves changes in values, feelings, skills and knowledge acquired by a student through the activities that they do (Boss 1999).

The outdoor education program must consist of activities planned and prepared thoroughly by personnel and teachers who use the environment, nature and direct experience in teaching and learning. It involves the process of learning by doing. All knowledge and experience will be obtained directly with the concept of 'hands on' or 'first hand' experience. Curriculum content can be enriched and developed through experiences gained through these activities. As the learning process is centered on the direct experience of the participants, teaching and learning acquired is more rapid and effective. Therefore, knowledge and experience gain are more sustainable. Dewey (1938) states that experience is very important to develop knowledge and for the process of socialization. Understanding and appreciation of the concept will be more effective if it is learned through experience and direct behavior.

Outdoor education often conducted in groups can provide a positive impact on participants' attitude changes. Group learning allows students to practice autonomy in learning, that is through self learning. Such challenges will make students more proactive and will be more concerned about their learning environment. Many experts in outdoor education state that group learning is an initial step for students to practice educational attitudes and skills.

Outdoor education plays an important role in developing group cohesiveness. Group cohesiveness is when more and more members of a group is attracted towards one another, thus increasing group integration. Participation in group activities allows students to work as a team, through the spirit of friendship, cooperation and tolerance to achieve success. This action leads directly to positive behavior and attitude changes. Knapp (1981) states that outdoor education can be a means to help individuals or groups based on the philosophy, conditioning and learning reinforcement to achieve organizational objectives. Burridge (2000) stated that the outdoor education program has resulted in changes to the participants themselves, for example, knowing themselves better, positive changes related to personal beliefs, attitudes and perceptions towards the environment and the world.

Curriculum Development Centre, Ministry of Education, Malaysia (1989) has outlined the philosophy for outdoor education in Malaysia as "Nature is a living laboratory that is rich with sources of knowledge. It can be integrated with practices that can enrich the experience and inculcate moral values in order to produce individuals who are healthy mentally, spiritually and physically in order to create integration among the people towards national unity".

Outdoor education can be defined as the use of resources from outside the classroom to achieve the goals and objectives of education (Knapp 1990). It is an interesting activity which can be integrated with other activities such as recreational, social, and religious activities other than education. In the education world it is deemed to be a cross-education. The learning goals of outdoor education programs typically focus on human development in a holistic manner. This goal is consistent with the outdoor education philosophy that assumes nature as a living laboratory that is rich with sources of knowledge. It can be integrated with daily practice and help enrich the experience and inculcate moral values in order to produce individuals who are healthy mentally, spiritually and physically.

The Health and Physical Education syllabus for high schools in Malaysia emphasized the importance of outdoor education and should be implemented in every school (Ministry of Education 1998). Among the outdoor education activities outlined in the syllabus are camping, orienteering, trekking and abseiling. Based on the structure of the syllabus, outdoor education program is the only subject that can produce a comprehensive education that includes educational domains such as psychomotor, cognitive, affective, social and emotional. Outdoor education in Health and Physical Education provides opportunities for students to try and experience the learning process through their participation in outdoor activities and physical activities. Outdoor Education is consider as a process-oriented learning tasks and it provide experiences in team work, responsibility, communication, and shared success after completion of assigned tasks.

Other empirical studies also support the importance of activities outside the classroom as a form of scaffolding that can enhance the learning experience (Keighley 1985; Mitchell 1992; Payne 1993). The merit of this activity revolves around the allegations that ‘outdoor education is the cure for all problems facing social and educational system’ (Gray & Perusco 1993) to more specific outcomes such as physical, social, intellectual and psychological development.

2. Problem statement

There are three main issues raised in this study. Based on the primary goals of the Malaysia’s National Philosophy of Education for producing wholesome individuals in terms of physical, emotional, spiritual and intellectual aspects, the first problem identified was how significant is the exposure to outdoor education programs help students to be emotionally stable, more positive and praiseworthy. There are several reasons why students do not like to be involved in physical activity. Among these reasons is boredom, activities not challenging and interesting, not exciting, past experiences proved to be frustrating, not being accepted in the group and support system is weak. Although outdoor education program has long been incorporated into the school curriculum, the implementation of this program is not very prominent due to poor program content and failure to achieve the program objectives, in terms of changing behavior and attitudes of participants.

Based on previous studies on the purpose of outdoor education, the second issue is the extent of attitude changes after exposure to outdoor education program becomes part of their everyday behavior. The positive attitude must be maintained after exposure to the outdoor education program so that participants can adopt a positive attitude in all situations of life. Ewert (1987) states that the friendship, cooperation, communication, respects for each other and a sense of belonging are important aspect resulting from participation in outdoor education. Outdoor education programs benefit all participants, including the success of the physical, emotional and psychological development as well as social assimilation. Neill (2000) and Exter (2001) state that outdoor education activities comprised of challenging physical activities involving a specific group. The results of these activities will be the development of positive attitude among the participants.

The last problem investigated in this study was to determine whether there is a difference in attitude between the sexes. Gender is also considered a contributing factor as it has been the culture of Malaysia which assumes that more girls are more feminine soft and compliant compared with male students. Estes and Ewert (1988) suggest this issue need to be considered because of gender differences in the participation and reaction to outdoor education program must be distinguished. This is because the level of confidence is different between men and women, whereby most women appreciate the program, while men focus on the challenges of adventure in the program. These differences in motivation will affect behavior, perception and effectiveness of outdoor education programs.

3. Purpose of the study

Based on the issues stated earlier, the general purpose of this study was to see how outdoor education programs can be used to help individuals develop significant psycho-social skills. Specifically, the purpose of this study are to examine the effectiveness of outdoor education program in cultivating personality development, to examine whether personality changes remained after exposure to the outdoor education program, to see the interaction effects of outdoor education programs between gender.

4. Methodology

A quasi experimental study involving 671 students was conducted to serve the purpose of the study. Sample of the study consists of teacher trainees from various universities and teacher training colleges in Malaysia. The sample was divided into two main groups: the experimental and the control group. The experimental groups were further divided into four groups whereby the researcher controls for type and sequence of outdoor activities that they were involved in. All groups were given a pre-test, a post-test and a post-post test. The instrument used in the Life Effectiveness Questionnaire (Neill 2002) which measures fourteen psychological and behavioral skills necessary for an effective life. Only four of those skills related to personality development were analyzed for this study. Statistical analysis used is descriptive and inferential statistics. Inferential statistics used are t-test, Cohen's D, multiple analysis of variance, multiple regression and a non parametric test which is the sign test to test for retention of personality changes.

5. Findings and results

5.1 Descriptive statistics

A sample of 590 students in institutions of higher education in Malaysia pursuing their bachelors' degree in sports science or physical education were in the experimental group and 81 students pursuing their education in other discipline of education act as a control group for this study. Therefore, the total sample for this study is 671 people, comprising of 249 (37.1%) were males and 422 (62.9%) were females.

5.2 Inferential statistics

For analysis purposes, Group 1refers to the treatment group (n = 590) who received exposure to outdoor education program activities, while Group 2 refers to the control group (n = 81) that did not receive exposure to outdoor education program activities. t test conducted showed that there were significant changes ($p < 0.05$) for all constructs studied. Therefore, the null hypothesis which states that there is no significant difference between personalities of individuals with exposure to outdoor education programs is rejected. This means that exposure to outdoor education program has a significant impact on individual behavior changes.

Table 2: Result of t test for changes in behavior as a result of exposure to outdoor education program

Construct	Group	Mean pre	Mean post	Gain score	SD	t	p	d
Cooperation	1	3.46	6.81	3.35	1.76	24.71	0.01*	0.34
	2	4.00	3.50	-0.50	1.24			
Leadership ability	1	2.31	6.41	4.11	0.92	42.79	0.01*	0.60
	2	2.60	2.44	-0.16	0.83			
Self confidence	1	2.67	6.77	4.11	0.80	37.07	0.01*	0.52
	2	2.59	2.51	-0.08	0.97			
Coping with change	1	2.36	6.52	4.16	0.85	43.67	0.01*	0.61
	2	2.45	2.43	-0.02	0.80			

*$p<0.05$

Analysis using t-test to compare between treatment and control groups showed a significant effect on the behavior changes of all the constructs studied. The results showed significant differences for the constructs of

cooperation ($t = 24.71$, $p < 0.05$), leadership ability ($t = 42.79$, $p < 0.05$), confidence ($t = 37.07$, $p < 0.05$), and coping with change ($t = 43.67$, $p < 0.05$).

Since there are behavior changes of participants as a result of exposure to outdoor education program, the researchers decided to analyze the effect size to see how much does outdoor education contributes towards behavioral changes. For these purposes, analysis of Cohen's d was used. With reference to Table 2, for the constructs studied, outdoor education contributes significantly 34% to changes in cooperation, 53% to changes in self confidence, 60% to changes in leadership ability and 61% to ability to cope with changes.

The next analysis test whether the hypothesis which states that outdoor education program does not have any significant effect on gender and behavioral changes is accepted or rejected. For this hypothesis the researchers conducted correlation statistics with two sets of variables. The variables are program exposure and gender. From Table 3, it can be concluded that exposure to outdoor education program has a significant correlation on participants behavioral changes. Meanwhile, there is no correlation between gender and behavioral changes as a result of exposure to outdoor education program.

Table 3: Correlation between constructs studied, exposure to outdoor education program and gender

Constructs	Mean	S.D.	r_p	p
Cooperation	2.88	2.12	Exposure = -0.59 Gender = -0.01	0.01* 0.73
Leadership ability	3.59	1.66	Exposure = -0.84 Gender = -0.01	0.01* 0.92
Self confidence	3.60	1.59	Exposure = -0.86 Gender = 0.03	0.01* 0.44
Coping with changes	3.66	1.60	Exposure = -0.85 Gender = -0.02	0.01* 0.71

*p<0.05

Multiple regression analysis was conducted to identify which variable is a good predictor for behavioral changes as a result of exposure to outdoor education program. Table 4 shows the results of the multiple regression analysis performed.

Table 4: Multiple regression analysis for behavior constructs (criteria) with gender and exposure to outdoor education program (predictors)

Behavior constructs	Predictors	R	R^2	Adj. R^2	R^2 change	F change	df	p
Cooperation	Exposure	0.59	0.36	0.35	0.35	359.96	1,669	0.01*
	Gender	0.03	0.01	0.01	0.01	0.76	1,669	0.38
	Exposure*Gender	0.59	0.35	0.35	0.00	0.12	1,668	0.73
Leadership ability	Exposure	0.84	0.70	0.70	0.70	1554.54	1,669	0.01*
	Gender	0.06	0.01	0.01	0.01	2.49	1,669	0.12
	Exposure*Gender	0.84	0.70	0.70	0.00	0.01	1,668	0.92
Self confidence	Exposure	0.86	0.74	0.74	0.74	1862.43	1,669	0.01*
	Gender	0.08	0.01	0.01	0.01	4.28	1,669	0.04*
	Exposure*Gender	0.86	0.74	0.74	0.00	0.59	1,668	0.44
Coping with changes	Exposure	0.85	0.72	0.72	0.72	1733.47	1,669	0.01*
	Gender	0.06	0.01	0.01	0.01	2.12	1,669	0.15
	Exposure*Gender	0.85	0.72	0.72	0.00	0.14	1,668	0.71

*p<0.05

Two multiple regression analysis was performed to see whether exposure to the outdoor education program and gender can predict the change in behavior among program participants. Regression equation shows that exposure to outdoor education program to has a significant impact for all behavior constructs studied (cooperation: $R^2 = 0:35$, $F(1.669) = 359.96$, $p < 0.05$; leadership ability: $R^2 = 0.70$, $F(1.669) = 1554.54$, $p < 0.05$; self confidence: $R^2 = 0.74$, $F(1.669) = 1862.43$, $p < 0.05$; coping with changes: $R^2 = 0.72$, $F(1.669) = 1733.47$, $p < 0.05$). Meanwhile, for the second predictor, namely gender, the regression equation showed that it was significant only for self-confidence ($R^2 = 0.01$, $F(1.669) = 4.28$, $p < 0.05$). Based on these results, exposure to outdoor education is a better predictor for behavior changes.

The final analysis conducted was to answer the question of whether behavior change as a result of exposure to outdoor education program remains in the individual after a certain amount of time. The analysis used to answer the question is a non-parametric which is the sign test.

Table 5: Result of the sign test

Constructs	%	z	p
Cooperation	60.5	3.39	0.01*
Leadership ability	64.5	4.67	0.01*
Self confidence	55.6	2.36	0.02*
Coping with changes	63.7	4.03	0.01*

*p<0.05

The sign test shows that there is a significant retention in behavior changes. The amount of retention is 60.5% for cooperation ($z = 3:39$, $p < 0.05$), 64.5% for leadership ability ($z = 4.67$, $p < 0.05$), 55.6% for self confidence ($z = 2:36$, $p < 0.05$), and 63.7% for ability to cope with changes ($z = 4:03$, $p < 0.05$).

6. Conclusion and Recommendations

Based on the analysis that was conducted, outdoor education does has impact on behavioral changes of the participants. The four construct studied which are the cooperation skills, leadership ability, self confidence and ability to cope with changes are closely related to individual personalities. Thus if this changes can be achieved through activities such as outdoor education, personality of an individual can be upgraded towards a more positive attitude. Furthermore this study also showed that the changes occurs after exposure to outdoor education program remain in an individual for a certain amount of time. If this is so, outdoor education should be a part of the education curriculum, in order to meet the goals of producing a well balanced individuals upon completion of their compulsory school years.

Education administrators who are interested in producing a balanced form of human capital should include outdoor education activities into the existing curriculum. Outdoor education programs and other co-curricular activities involve interactions outside the classroom (Eagle, Gordon & Lewis 2000; Neill 2000). These interactions proved beneficial in producing the future human capital with all the necessary soft skills needed to survive in the 21st century. This study supports previous research on the benefits of outdoor education programs for students (Haynes & Galligher 1998). It is recommended that all institutions of education need to help students develop a positive personality. An outdoor education program with the aim of cultivating positive personality must be specially design to cater the needs of these students at the beginning of their educational program. In order to ensure the positive personality remains and become part of them, small workshops to strengthen and maintain these positive attitudes should be conducted throughout the course of education.

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